

**AMENDMENTS TO THE CLAIMS**

1           1. (original) A method of constructing a data pattern comprising:  
2                     calculating an actual value using selected data of the data pattern;  
3                     determining a desired value of the actual-value calculation using the selected  
4 data;  
5                     determining a correction value to be applied to a portion of the selected data;  
6                     performing an operation using the correction value and the portion of the  
7 selected data, thereby yielding a replacement value; and  
8                     making the portion of the selected data equal to the replacement value, thereby  
9 yielding adjusted selected data.

1           2. (original) The method of claim 1, wherein:  
2                     the data pattern comprises a data loop;  
3                     the desired value is stored in a first frame of the data loop; and  
4                     the actual value is a function of the content of a preceding frame of the data  
5 loop.

1           3. (original) The method of claim 2, wherein the data pattern comprises binary data  
2 and the step of determining the correction value comprises performing an exclusive-Or  
3 operation of the actual value and the desired value.

1           4. (original) The method of claim 3, wherein the step of performing the operation  
2 comprises performing an exclusive-Or operation of the correction value and the portion of the  
3 selected data.

1           5. (original) The method of claim 4, wherein the data pattern is used for time-  
2 domain testing.

1           6. (original) The method of claim 5, wherein the time-domain testing comprises bit-  
2 error-rate testing.

1           7. (original) The method of claim 4, wherein the data pattern is used for frequency-  
2 domain testing.

1           8. (original) The method of claim 7, wherein the frequency-domain testing  
2 comprises spectrum analysis.

1           9. (original) The method of claim 4, wherein the data pattern comprises at least one  
2 Synchronous Optical Network (SONET) frame.

1           10. (original) The method of claim 9, wherein the step of calculating comprises  
2 performing a Bit Interlace Parity (BIP) calculation.

1           11. (original) The method of claim 10, wherein:  
2                   the data pattern comprises at least a last frame and a first frame;  
3                   the desired value is stored in the first frame;  
4                   the actual value is calculated on the last frame.

1           12. (original) The method of claim 10, wherein the data pattern comprises a plurality  
2 of frames and a plurality of the plurality of frames include identical B bytes.

1           13. (original) The method of claim 11, wherein the last frame and the first frame are  
2 the same frame.

1           14. (original) The method of claim 10, wherein the desired value comprises at least  
2 one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1           15. (original) The method of claim 9, wherein the number of frames in the data  
2 pattern equals one.

1           16. (original) The method of claim 4, wherein the data pattern comprises at least one  
2 Synchronous Digital Hierarchy (SDH) frame.

1           17. (original) The method of claim 16, wherein the step of calculating comprises  
2 performing a Bit Interlace Parity (BIP) calculation.

1           18. (original) The method of claim 17, wherein:  
2                   the data pattern comprises at least a last frame and a first frame;  
3                   the desired value is stored in the first frame;  
4                   the actual value is calculated on the last frame.

1           19. (original) The method of claim 17, wherein the data pattern comprises a plurality  
2 of frames and a plurality of the plurality of frames include identical B bytes.

1           20. (original) The method of claim 18, wherein the last frame and the first frame are  
2 the same frame.

1           21. (original) The method of claim 17, wherein the desired value comprises at least  
2 one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1           22. (original) The method of claim 1, further comprising:  
2                   calculating a second actual value using second selected data of the data  
3 pattern;  
4                   determining a second desired value of the second-actual-value calculation  
5 using the second selected data;  
6                   determining a second correction value to be applied to a portion of the second  
7 selected data;  
8                   performing an operation using the second correction value and the portion of  
9 the second selected data, thereby yielding a second replacement value; and  
10                  making the portion of the second selected data equal to the second  
11 replacement value, thereby yielding adjusted second selected data.

1           23. (original) The method of claim 22, wherein the step of determining the second  
2 correction value comprises performing an exclusive-Or operation of the second actual value  
3 and the second desired value.

1           24. (original) The method of claim 23, wherein the step of performing the operation  
2 using the second correction value comprises performing an exclusive-Or operation of the  
3 second correction value and the portion of the second selected data.

1           25. (currently amended)       The method of claim 24, wherein the second selected  
2 data and the portion of the second selected data are mutually exclusive.

1           26. (original) The method of claim 1, wherein the selected data is selected from a  
2           single frame of the data pattern.

1           27. (original) The method of claim 1, further comprising calculating an adjusted  
2           actual value using the adjusted selected data, wherein the adjusted actual value equals the  
3           desired value.

1           28. (original) The method of claim 1, wherein the step of determining the correction  
2           value comprises performing an exclusive-Or operation of the actual value and the desired  
3           value.

1           29. (original) The method of claim 1, wherein the step of performing the operation  
2           comprises performing an exclusive-Or operation of the correction value and the portion of the  
3           selected data.

1           30. (original) An error-rate test system comprising:  
2                   a pattern generator adapted to input a finite data pattern comprising at least  
3           one frame to a device under test, wherein the device under test sequentially processes and  
4           outputs data of the input finite data pattern;

5                   wherein a correction value comprises the result of an exclusive-Or operation  
6           of an actual value and a desired value of a calculation performed on a selected portion of at  
7           least one frame of the finite data pattern;

8                   wherein a replacement value comprises an exclusive-Or operation of the  
9           correction value and a portion of the selected portion; and

10                    wherein the portion of the selected portion is made equal to the replacement  
11 value.

1                    31. (original) The system of claim 30, wherein the data pattern comprises at least one  
2 Synchronous Optical Network (SONET) frame.

1                    32. (original) The system of claim 31, wherein the actual value comprises the result  
2 of a Bit Interlace Parity (BIP) calculation.

1                    33. (original) The system of claim 32 wherein:  
2                    the data pattern comprises at least a last frame and a first frame;  
3                    the desired value is stored in the first frame;  
4                    the actual value is calculated on the last frame.

1                    34. (original) The system of claim 30, wherein the data pattern comprises a plurality  
2 of frames and a plurality of the plurality of frames include identical B bytes.

1                    35. (original) The system of claim 33, wherein the last frame and the first frame are  
2 the same frame.

1                    36. (original) The system of claim 30, wherein the desired value comprises at least  
2 one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1                    37. (original) The system of claim 30, wherein the number of frames in the data  
2 pattern equals one.

1           38. (original) The system of claim 30, wherein the data pattern comprises at least one  
2 Synchronous Digital Hierarchy (SDH) frame.

1           39. (original) The system of claim 38, wherein the actual value comprises the result  
2 of a Bit Interlace Parity (BIP) calculation.

1           40. (original) The system of claim 39, wherein:  
2                   the data pattern comprises at least a last frame and a first frame;  
3                   the desired value is stored in the first frame;  
4                   the actual value is calculated on the last frame.

1           41. (original) The system of claim 38, wherein the data pattern comprises a plurality  
2 of frames and a plurality of the plurality of frames include identical B bytes.

1           42. (original) The system of claim 40, wherein the last frame and the first frame are  
2 the same frame.

1           43. (original) The system of claim 30, wherein the desired value comprises at least  
2 one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1           44. (original) The system of claim 30, wherein:  
2                   a second actual value is calculated using a second selected portion of the at  
3 least one frame;  
4                   a second desired value of the second-actual-value calculation is determined  
5 using the second selected portion;

6                   a second correction value to be applied to a portion of the second selected  
7 portion is determined;

8                   an operation is performed using the second correction value and the portion of  
9 the second selected portion, the operation using the second correction value and the portion  
10 of the second selected portion yielding a second replacement value; and

11                  the portion of the second selected data is made equal to the second  
12 replacement value, thereby yielding an adjusted second selected portion.

1                  45. (original) The system of claim 44, wherein the determination of the second  
2 correction value comprises performing an exclusive-Or operation of the second actual value  
3 and the second desired value.

1                  46. (original) The system of claim 45, wherein the operation using the second  
2 correction value and the portion of the second selected portion comprises performing an  
3 exclusive-Or operation of the second correction value and the portion of the second selected  
4 portion.

1                  47. (original) The system of claim 46, wherein the selected portion and the portion of  
2 the second selected portion are mutually exclusive.

1                  48. (original) The system of claim 30, wherein the selected portion is selected from a  
2 single frame of the data pattern.

1                  49. (original) The system of claim 30, wherein an adjusted actual value using the  
2 adjusted selected data is calculated and the adjusted actual value equals the desired value.